CLAIMS

What is claimed is:

1.   A method for use with an enterprise operation and at least one processor programmed to perform at least one diagnostic process on the operation and to at least periodically perform at least one summary process on the operation, the method for commencing the at least one summary process and comprising the
5   steps of:
            specifying at least one triggering relationship between at least a first enterprise user and the operation that is to initiate the at least one summary process;
            determining when the at least one triggering relationship occurs; and
            when the at least one triggering relationship occurs, causing the processor
10   to perform the at least one summary process.

2.   The method of claim 1 wherein the at least one summary process includes analyzing the results of the at least one diagnostic process.

3.   The method of claim 2 wherein the at least one summary process also includes, when the analyzing step results in at least one interesting condition, performing another process.

4.   The method of claim 3 wherein the another process is at least one of
5   another diagnostic process and a summary process.

5.   The method of claim 3 wherein the step of performing another process includes indicating that an interesting condition has occurred.

6.   The method of claim 1 wherein the at least one summary process includes indicating at least a sub-set of the results of the at least one diagnostic process.

7.   The method of claim 6 wherein the step of indicating includes providing an interface to at least the first user and indicating the at least a sub-set of results to the first user via the interface.

8. The method of claim 1 wherein the triggering relationship also initiates the at least one diagnostic process.

9. The method of 8 wherein the at least one summary process includes the steps of analyzing the results of the at least one diagnostic process to identify interesting conditions.

10. The method of 9 further including the step of, wherein when an interesting condition is identified, indicating that an interesting condition has occurred.

11. The method of claim 1 wherein the at least one triggering relationship specifies a first relative juxtaposition of the operation and the first enterprise user.

12. The method of claim 11 further including the steps of monitoring a period since the last performance of the at least one summary process, performing the at least one summary process at least once every Y hours independent of the occurrence of the at least one triggering relationship and, after the at least one triggering relationship occurs, resetting the period.

13. The method of claim 11 further including the step of monitoring the period since the last performance of the at least one summary process wherein the at least one triggering relationship specifies that the at least one summary process should be performed when the first user and the assembly are in the first relative juxtaposition and when the period since the last performance of the at least one process exceeds X hours.

14. The method of claim 1 further including the step of, after the at least one summary process has been completed, indicating completion.

15. The method of claim 11 wherein the step of determining includes providing an information device to the at least a first user and at least one sensor for sensing location of the information device and determining location of the information device via interaction between the information device and the at least one sensor.

16. The method of claim 13 wherein the step of providing an information device and at least one sensor includes providing a wireless information device (WID) and at least one access point and wherein the step of determining location includes transmitting signals from at least one of the WID and the access point to the other of the WID and the access point and using the transmitted signals to determine location.

17. The method of claim 14 further including the step of, after the at least one summary process has been completed, indicating completion.

18. The method of claim 17 wherein the step of indicating completion includes providing an indication to the at least a first user via transmission from the at least one access point to the WID.

19. The method of claim 15 further including the steps of, when the at least one summary process identifies an interesting condition, performing a function.

20. The method of claim 19 wherein the step of performing a function includes indicating the interesting condition to the at least one user via the WID.

21. The method of claim 11 wherein a plurality of users use the enterprise, the step of determining including determining if at least one of the enterprise users is in the specified relative juxtaposition to the assembly and, where at least one of the users is in the specified relative juxtaposition, determining if the user in the specified juxtaposition is the first user and, where the user in the specified juxtaposition is the first user, determining that the triggering relationship has occurred.

22.   The method of claim 11 wherein a plurality of users use the enterprise and wherein the at least one triggering relationship includes relationships with at least a sub-set of the enterprise users where each sub-set user is characterized by a triggering characteristic set, the step of determining including determining if at least one of the enterprise users is in the specified relative juxtaposition to the assembly and, where at least one of the users is in the specified relative juxtaposition, determining if the user in the specified juxtaposition is characterized by the triggering characteristic set.

23.   The method of claim 22 wherein the triggering characteristic set includes qualification to use at least one summary process results.

24.   The method of claim 23 wherein the triggering characteristic set includes availability to examine summary process results and wherein the step of determining further includes accessing a schedule database that indicates the schedules of the enterprise users and determining if the user in the specified relative juxtaposition is currently unoccupied.

25.   The method of claim 1 wherein the operation includes an automated assembly.

26.   The method of claim 1 wherein the operation is a communication network.

27.   The method of claim 1 wherein the summary process is at least one of a batch process, a safety process, a redundancy process and a security process.

28.　　A method for use with an enterprise operation and at least one processor programmed to perform at least one diagnostic process on the operation and to at least periodically perform at least one summary process on the operation, the method for commencing the at least one summary process and comprising the steps of:

　　specifying at least a first relative juxtaposition of the operation and a qualified enterprise user that is to initiate the at least one summary process wherein the qualified user is any user that is qualified to use the results of the at least first summary process;

　　determining when at least one qualified user is in the at least first relative juxtaposition with respect to the operation; and

　　when at least one qualified user is in the at least first relative juxtaposition with respect to the operation, causing the processor to perform the at least one summary process.

29.　　The method of claim 28 wherein the summary process also includes determining if the qualified user that is in the at least first relative juxtaposition with respect to the operation is unoccupied and, when the user is unoccupied, performing at least a summary sub-process.

30.　　The method of claim 29 wherein the summary sub-process includes determining if the diagnostic results include at least one interesting condition and, when the results include at least one interesting condition, indicating the interesting condition to the user.

31.　　The method of claim 28 further including the step of, when at least one qualified user is in the at least first relative juxtaposition with respect to the operation, obtaining information about the user, the step of causing the processor to perform including causing the processor to identify at least one summary process as a function of the identity of the obtained information about the user and performing the one summary process.

32.　　The method of claim 31 wherein the step of obtaining information includes identifying the user.

33.   A method for use with a plurality of operations that are spaced out within a facility, the method for identifying when at least one interesting condition occurs within the facility and comprising the steps of:

specifying at least a first pattern of diagnostically interesting incidences

5   that correspond to the at least one interesting condition where the at least a first pattern is at least in part related to relative juxtapositions of the diagnostically interesting incidences;

performing diagnostic processes related to each of the operations and identifying diagnostically interesting incidences;

10   when a diagnostically interesting incident is identified, identifying the relative juxtapositions of the identified incident with respect to at least a sub-set of previously identified diagnostically interesting incidences;

comparing the relative juxtapositions to the at least a first pattern; and

where the relative juxtapositions match the at least a first pattern,

15   indicating that the first pattern has occurred.

34.   The method of claim 33 wherein the step of specifying at least a first pattern includes specifying a space size and a number of diagnostically interesting incidences that have to occur within the space size for the at least a first pattern to occur.

35.   The method of claim 33 wherein the step of identifying the relative juxtapositions includes providing a diagnostics map corresponding to the facility and indicating the locations of the diagnostically interesting incidences on the diagnostics map.

36. A method for use with an enterprise operation and at least one processor linked to the operation, the method for requesting service from a most optimal enterprise user when at least one interesting condition related to the operation occurs, the method comprising the steps of:

5   monitoring the operation for at least one diagnostically interesting condition;

when at least one diagnostically interesting condition is identified, identifying at least one of the enterprise users as the most optimal user to address the diagnostically interesting condition; and

10   indicating the most optimal user.

37. The method of claim 36 wherein the step of identifying includes identifying the enterprise user that is most proximate the operation.

38. The method of claim 37 wherein the step of identifying the most proximate user includes providing a wireless information device to each enterprise user, determining the juxtapositions with respect to the operation of at least a sub-set of the WIDs and comparing the relative juxtapositions.

39. The method of claim 38 further including the step of providing at least one stationary access point within the enterprise, the step of determining the relative juxtaposition of each of the sub-set of WIDs including transmitting signals from one of the WID and the at least one access point to the other of the WID and the at least 5 one access point, using the transmitted signals to determine the location of the WID with respect to the operation and comparing the WID locations.

40. The method of claim 37 wherein the step of identifying includes identifying a sub-set of the users that is qualified to address the diagnostically interesting condition and selecting one of the qualified users as the most optimal user.

41. The method of claim 40 wherein the step of selecting includes selecting the one of the qualified users that is most proximate the operation.

42.   The method of claim 41 wherein the step of identifying the most proximate user includes providing a wireless information device (WID) to each enterprise user, determining the juxtapositions with respect to the operation of at least a sub-set of the WIDs and comparing the relative juxtapositions.

43.   The method of claim 42 further including the step of providing at least one stationary access point within the enterprise, the step of determining the relative juxtaposition of each of the sub-set of WIDs including transmitting signals from one of the WID and the at least one access point to the other of the WID and the at least one access point, using the transmitted signals to determine the location of the WID with respect to the operation and comparing the WID locations.

44.   The method of claim 36 wherein the step of identifying includes accessing a schedule database that indicates the schedules of the enterprise users.

45.   The method of claim 44 wherein the step of identifying further includes identifying a sub-set of the enterprise users that is currently unoccupied and selecting one of the unoccupied users as the most optimal user.

46.   The method of claim 44 wherein the enterprise includes sub-spaces and the operation is within a first sub-space and wherein the step of identifying further includes identifying the one of the enterprise users that is next scheduled to be within the first sub-space.

47.   The method of claim 46 further including the step of amending the schedule of the user that is next scheduled to be within the first sub-space to include an appointment to address the interesting condition.

48.   The method of claim 46 wherein the at least one diagnostically interesting condition is one of a malfunction and an unexpected occurrence.

49.   The method of claim 40 wherein the step of selecting includes accessing a schedule database that indicates the schedules of the enterprise users, using the schedule database to identify relative availability of the qualified users and selecting the most available user as the optimal user.

50. The method of claim 36 further including the step of providing notice to the optimal user that the at least one interesting condition has occurred.

51. The method of claim 50 wherein the step of providing notice includes amending a schedule for the optimal user to add an appointment to address the interesting con

52. The method of claim 51 wherein the step of amending a schedule includes requesting acceptance of the appointment from the optimal user and, when the appointment is accepted, amending the schedule.

53. The method of claim 52 wherein the step of requesting acceptance includes starting a timer after requesting acceptance and, after a query period expires, identifying the next most optimal user to address the interesting condition and indicating the next most optimal user.

54. The method of claim 52 wherein, when the appointment is rejected, the method further includes the step of identifying the next most optimal user to address the interesting condition and indicating the next most optimal user.

55. The method of claim 36 wherein the step of identifying includes identifying the enterprise user that most recently addressed the interesting condition for the specific assembly.

56. The method of claim 36 wherein the step of identifying includes identifying the enterprise user that has the most experience addressing the interesting condition.

57. The method of claim 36 wherein the step of identifying includes identifying the enterprise user that has had the most success addressing the interesting condition.

58.   The method of claim 36 wherein the enterprise includes a plurality of operations and wherein the step of identifying includes identifying the enterprise user that most recently addressed the interesting condition for any of the enterprise operations.

59.   The method of claim 36 wherein the operation includes an automated assembly.

60.   The method of claim 36 wherein the operation is a communication network.

61.   The method of claim 36 wherein the summary process is at least one of a batch process, a safety process, a redundancy process and a security process.

62.   A method for use with an assembly to be located within an enterprise, the method for associating the assembly with an optimal service resource for reporting diagnostically interesting incidences related to the assembly, the method comprising the steps of:

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positioning at least a first service resource within the enterprise;

positioning the assembly within the enterprise;

identifying an optimal one of the service resources for monitoring assembly operations based at least in part on the relative juxtaposition of the assembly to each of the first and second service resources;

10
monitoring the assembly for the occurrence of at least one diagnostically interesting incident; and

when a diagnostically interesting incident occurs, indicating the incident to the optimal one of the service resources.

63.   The method of claim 62 wherein the step of identifying the optimal one of the service resources includes the step of determining which of the services resources is closest to the assembly.

64.   An apparatus for use with an enterprise operation and at least one processor programmed to perform at least one diagnostic process on the operation and to at least periodically perform at least one summary process on the operation, the method for commencing the at least one summary process, the apparatus comprising:

a database specifying at least one triggering relationship between at least a first enterprise user and the operation that is to initiate the at least one summary process; and

a processor programmed to perform the steps of:

determining when the at least one triggering relationship occurs; and

when the at least one triggering relationship occurs, performing the at least one summary process.

65.   The apparatus of claim 64 wherein the at least one diagnostic process is performed routinely and wherein the processor performs the at least one summary process by analyzing the results of the at least one diagnostic process.

66.   The apparatus of claim 64 wherein the processor performs the at least one summary process by, when the analyzing step results in at least one interesting condition, performing another process.

67.   The apparatus of claim 66 wherein the processor performs another process by indicating that an interesting condition has occurred.

68.   The apparatus of claim 64 wherein the processor performs the at least one summary process by indicating at least a sub-set of the results of the at least one diagnostic process.

69.   The apparatus of claim 68 wherein the processor indicates by providing an interface to at least the first user and indicating the at least a sub-set of results to the first user via the interface.

70.   The apparatus of claim 64 wherein the processor also initiates the at least one diagnostic process when the triggering relationship occurs.

71.   The apparatus of claim 70 wherein the processor performs the at least one summary process by analyzing the results of the at least one diagnostic process to identify interesting conditions and, when an interesting condition is identified, indicating that an interesting condition has occurred.

72.   The apparatus of claim 64 wherein the at least one triggering relationship specifies a first relative juxtaposition of the operation and the first enterprise user.

73.   The apparatus of claim 72 wherein the processor is also programmed to monitor a period since the last performance of the at least one summary process, perform the at least one summary process at least once every Y hours independent of the occurrence of the at least one triggering relationship and, after the at least one

5   triggering relationship occurs, reset the period.

74.   The apparatus of claim 72 wherein the processor is also programmed to monitor a period since the last performance of the at least one summary process wherein the at least one triggering relationship specifies that the at least one summary process should be performed when the first user and the operation are in the first relative juxtaposition and when the period since the last performance of the at least one process exceeds X hours.

75.   The apparatus of claim 64 wherein the processor is also programmed to, after the at least one summary process has been completed, indicating completion.

76.   The apparatus of claim 72 for use with an information device used by the at least a first user, the further including at least one sensor for sensing location of the information device and wherein the processor is programmed to determine location of the information device via interaction between the information device and the at least one sensor.

77.   The apparatus of claim 76 wherein the information device includes a wireless information device (WID) and the sensor is at least one access point, the WID and sensor cooperate by transmitting signals from at least one of the WID and the access point to the other of the WID and the access point and wherein the processor determines location via the transmitted signals.

78.   The apparatus of claim 77 wherein the processor, after the at least one summary process has been completed, indicating completion.

79.   The apparatus of claim 78 wherein the processor indicates by providing an indication to the at least a first user via transmission from the at least one access point to the WID.

80.   The apparatus of claim 77 wherein the processor, when the at least one summary process identifies an interesting condition, performs a function.

81.   The apparatus of claim 80 wherein the processor performs a function by indicating the interesting condition to the at least one user via the WID.

82.   The apparatus of claim 72 wherein a plurality of users use the enterprise, the processor determining by determining if at least one of the enterprise users is in the specified relative juxtaposition to the operation and, where at least one of the users is in the specified relative juxtaposition, determining if the user in the specified juxtaposition is the first user and, where the user in the specified juxtaposition is the first user, determining that the triggering relationship has occurred.

83.   The apparatus of claim 72 wherein a plurality of users use the enterprise and wherein the at least one triggering relationship includes relationships with at least a sub-set of the enterprise users where each sub-set user is characterized by a triggering characteristic set, the processor determining by determining if at least one of the enterprise users is in the specified relative juxtaposition to the operation and, where at least one of the users is in the specified relative juxtaposition, determining if the user in the specified juxtaposition is characterized by the triggering characteristic set.

84.   The apparatus of claim 83 wherein the triggering characteristic set includes qualification to use at least one summary process results.

85.   The apparatus of claim 84 wherein the triggering characteristic set includes availability to examine summary process results and wherein the processor determines by accessing a schedule database that indicates the schedules of the enterprise users and determining if the user in the specified relative juxtaposition is currently unoccupied.

86.   The apparatus of claim 64 wherein the operation is an automated assembly.

87. An apparatus for use with an enterprise operation and at least one processor programmed to perform at least one diagnostic process on the operation and to at least periodically perform at least one summary process on the operation, the apparatus for commencing the at least one summary process and comprising:

providing a database that specifies at least a first relative juxtaposition of the operation and a qualified enterprise user that is to initiate the at least one summary process wherein the qualified user is any user that is qualified to use the results of the at least first summary process; and

a processor programmed to perform the steps of:

determining when at least one qualified user is in the at least first relative juxtaposition with respect to the operation; and

when at least one qualified user is in the at least first relative juxtaposition with respect to the operation, performing the at least one summary process.

88. The apparatus of claim 87 wherein the summary process also includes determining if the qualified user that is in the at least first relative juxtaposition with respect to the operation is unoccupied and, when the user is unoccupied, performing at least a summary sub-process.

89. The apparatus of claim 88 wherein the summary sub-process includes determining if the diagnostic results include at least one interesting condition and, when the results include at least one interesting condition, indicating the interesting condition to the user.

90.   An apparatus for use with an enterprise operation and at least one processor linked to the operation, the apparatus for requesting service from a most optimal enterprise user when at least one interesting condition related to the operation occurs, the apparatus comprising:

5   a processor programmed to perform the steps of:

monitoring the operation for at least one diagnostically interesting condition;

when at least one diagnostically interesting condition is identified, identifying at least one of the enterprise users as the most optimal user to address

10   the diagnostically interesting condition; and

indicating the most optimal user.

91.   The apparatus of claim 90 wherein the processor identifies by identifying the enterprise user that is most proximate the operation.

92.   The apparatus of claim 91 further including a wireless information device provided to each enterprise user wherein the processor identifies the most proximate user by determining the juxtapositions with respect to the operation of at least a sub-set of the WIDs and comparing the relative juxtapositions.

93.   The apparatus of claim 92 further including at least one stationary access point within the enterprise, the at least one access point and device cooperating by transmitting signals from one of the WID and the at least one access point to the other of the WID and the at least one access point, the processor

5   identifying by using the transmitted signals to determine the location of the WID with respect to the operation and comparing the WID locations.

94.   The apparatus of claim 92 wherein the step of identifying includes identifying a sub-set of the users that is qualified to address the diagnostically interesting condition and selecting one of the qualified users as the most optimal user.

95.   The apparatus of claim 94 wherein the step of selecting includes selecting the one of the qualified users that is most proximate the operation.

96.   The apparatus of claim 95 wherein the step of identifying the most proximate user includes providing a wireless information device (WID) to each enterprise user, determining the juxtapositions with respect to the operation of at least a sub-set of the WIDs and comparing the relative juxtapositions.

97.   The apparatus of claim 96 further including the step of providing at least one stationary access point within the enterprise, the step of determining the relative juxtaposition of each of the sub-set of WIDs including transmitting signals from one of the WID and the at least one access point to the other of the WID and the at least one access point, using the transmitted signals to determine the location of the WID with respect to the operation and comparing the WID locations.

98.   The apparatus of claim 90 further including the step of providing an enterprise user schedule database that indicates the schedules of the enterprise users and wherein the step of identifying includes accessing a schedule database.

99.   The apparatus of claim 98 wherein the step of identifying further includes identifying a sub-set of the enterprise users that is currently unoccupied and selecting one of the unoccupied users as the most optimal user.

100.   The apparatus of claim 98 wherein the enterprise includes sub-spaces and the operation is within a first sub-space and wherein the step of identifying further includes identifying the one of the enterprise users that is next scheduled to be within the first sub-space.

101.   The apparatus of claim 100 further including the step of amending the schedule of the user that is next scheduled to be within the first sub-space to include an appointment to address the interesting condition.

102.   The apparatus of claim 100 wherein the at least one diagnostically interesting condition is one of a malfunction and an unexpected occurrence.

103. The apparatus of claim 94 further including an enterprise user schedule database that indicates the schedules of the enterprise users and wherein the step of selecting includes accessing a schedule database, using the schedule database to identify relative availability of the qualified users and selecting the most available user as the optimal user.

104. The apparatus of claim 90 wherein the processor also provides notice to the optimal user that the at least one interesting condition has occurred.

105. The apparatus of claim 104 wherein the step of providing notice includes amending a schedule for the optimal user to add an appointment to address the interesting condition.

106. The apparatus of claim 105 wherein the step of amending a schedule includes requesting acceptance of the appointment from the optimal user and, when the appointment is accepted, amending the schedule.

107. The apparatus of claim 106 wherein the step of requesting acceptance includes starting a timer after requesting acceptance and, after a query period expires, identifying the next most optimal user to address the interesting condition and indicating the next most optimal user.

108. The apparatus of claim 106 wherein, when the appointment is rejected, the apparatus further includes the step of identifying the next most optimal user to address the interesting condition and indicating the next most optimal user.

109. The apparatus of claim 90 wherein the step of identifying includes identifying the enterprise user that most recently addressed the interesting condition for the specific assembly.

110. The apparatus of claim 90 wherein the operation is an automated assembly.